# PREBIOTIC POTENTIAL OF BANANA AND RED DRAGON FRUIT PEEL

SITI LIYANA HAZIQAH BINTI HAMIDON

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This Final year Project Report entitled "**Prebiotic Potential of Banana and Red Dragon Fruit Peel**" was submitted by Siti Liyana Haziqah binti Hamidon in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by


_____
Noer Hartini Binti Dolhaji
Supervisor
Faculty of Applied Sciences
Universiti Teknologi MARA
Cawangan Negeri Sembilan
72000 Kuala Pilah Negeri Sembilan

_____
Ida Muryany Binti Md Yasin
Co-supervisor
Faculty of Applied Sciences
Universiti Teknologi MARA
Cawangan Negeri Sembilan
72000 Kuala Pilah Negeri Sembilan

_____
Sarini Binti Ahmad Wakid
Project Coordinator
Faculty of Applied Sciences
Universiti Teknologi MARA
Cawagan Negeri Sembilan
72000 Kuala Pilah Negeri Sembilan

_____
Dr. Nor'aishah Binti Abu Shah
Head of Pure Science School
Faculty of Applied Sciences
Universiti Teknologi MARA
Cawangan Negeri Sembilan
72000 Kuala Pilah Negeri Sembilan


Date: _____

**TABLE OF CONTENTS**


| | | PAGE |
|---|---|---|
| **ACKNOWLEDGEMENTS** | | **iii** |
| **TABLE OF CONTENTS** | | **iv** |
| **LIST OF TABLES** | | **vi** |
| **LIST OF FIGURES** | | **vii** |
| **LIST OF ABBREVIATIONS** | | **viii** |
| **ABSTRACT** | | **ix** |
| **ABSTRAK** | | **x** |
| **CHAPTER 1: INTRODUCTION** | | |
| 1.1 | Background Study | 1 |
| 1.2 | Problem Statement | 3 |
| 1.3 | Significance of the Study | 4 |
| 1.4 | Objectives of the Study | 4 |
| **CHAPTER 2: LITERATURE REVIEW** | | |
| 2.1 | Prebiotics | 5 |
| | 2.1.1 Fructooligosaccharides | 5 |
| | 2.1.2 Inulin | 6 |
| | 2.1.3 Oligosaccharides | 7 |
| | 2.1.4 Lactulose | 8 |
| 2.1 | Prebiotic Effect | 9 |
| 2.2 | Prebiotic Potential | 9 |
| 2.4 | Probiotics | 10 |
| | 2.4.1 *Lactobacillus* | 11 |
| | 2.4.1.1 *Lactobacillus acidophilus* | 11 |
| 2.5 | Red Dragon Fruit (*Hylocereus polyrhizus)* | 12 |
| 2.6 | Banana (*Musa acuminate colla*) | 13 |
| 2.7 | Fruit Nutrition | 14 |
| | 2.7.1 The nutrition of dragon fruits | 14 |
| | 2.7.2 The nutrition of banana | 15 |
| **CHAPTER 3: METHODOLOGY** | | |
| 3.1 | Introduction | 17 |
| 3.2 | Materials | 19 |
| | 3.2.1 Raw materials | 19 |
| | 3.2.2 Chemicals | 19 |
| | 3.2.3 Apparatus | 19 |
| 3.2 | Methods | 20 |
| | 3.2.1 Sample preparation | 20 |
| | 3.2.1.1 Dragon fruit peels preparation | 20 |

3.2.1.2 Banana peels preparation 21
3.2.2 Sample extraction 21
3.2.3 Effect of probiotic growth 21
3.2.4 Determination of sugar composition 22
3.2.4.1 Dinitrosalicyclic acid assay 22
3.2.4.2 Fructose assay 23
3.3 Data Analysis 24

**CHAPTER 4: RESULTS AND DISCUSSION**
4.1 Effect of Banana and Red Dragon fruit Peel on Prebiotic Growth 25
4.2 Determination of Sugar Composition in Banana and Red Dragon Fruit Peel 29
4.2.1 Determination of glucose by using dinitrosalicyclic Acid (DNS) assay 30
4.2.2 Determination of fructose by using fructose assay 32

**CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS** 36

**CITED REFERENCES** 38
**APPENDICES** 43
**CURRICULUM VITAE** 44

## ABSTRACT

### PREBIOTIC POTENTIAL OF BANANA AND RED DRAGON FRUIT PEEL

The aim of this study was to identify the potential of the peel from the banana (*Musa acuminate colla)* and red dragon fruit (*Hylocereus polyrhizes)* as prebiotic and also to analyse the sugar content from both of the peels. The steps involved in this study were sample preparation and extraction by using the soxhlet extraction, rotary evaporator, prebiotic activity assay using the *Lactobacillus sp.* isolated from the cultured drink, determination of the sugar composition by using the dinitrosalicyclic assay (DNS) and fructose assay and measured by comparison with the standard curve of glucose and fructose. In this study, it was found that both banana and red dragon fruit peels has a potential source of prebiotics due to its capabilities to stimulate the growth of probiotic strain that was *Lactobacillus sp.* The increasing number of microbial counts between both samples showed no significant differences at ($p \leq 0.05$). Next, for the determination of glucose using the DNS assay, it was found that the glucose concentration was the highest in banana peel meanwhile for the fructose determination, the highest fructose concentration was in the red dragon fruit peel. It can be concluded that both peel have benefits and can be used as prebiotic.